

# INSTALLATION INSTRUCTIONS

## AMF0020TA1 OUTDOOR THERMOSTAT KIT

For Use With FCP, FCX and EF  
Fan Cabinets and Electric Furnace

These instructions must be read and understood completely before attempting installation.

BEFORE STARTING INSTALLATION, DISCONNECT ALL POWER TO THE UNIT.

### WARNING

Electrical shock hazard.

Turn OFF electric power at fuse box or service panel before making any electrical connections and ensure a proper ground connection is made before connecting line voltage.

Failure to do so can result in property damage, personal injury and/or death.

### OUTDOOR THERMOSTAT KIT

The Outdoor Thermostat Kit may be used to stage electric heat elements in conjunction with a heat pump or to stage elements when only electric heat is being used.

The kit consists of an electronic two stage control that is mounted on or near the indoor unit and a remote mounted Outdoor Temperature Sensor. The control comes with 8 feet of wire on the outdoor temp sensor, but it can be spliced as necessary and extended up to 400 feet.

### ELECTRONIC CONTROL LOCATION AND MOUNTING

The control has four key hole slots in the back to allow it to be mounted on the side of the blower cabinet or on a nearby wall. Remove the front cover from the control and position control in desired location, then use a pencil to mark screw locations. Install screws so heads protrude to fit through slots, position control on screws and then tighten bottom screws.

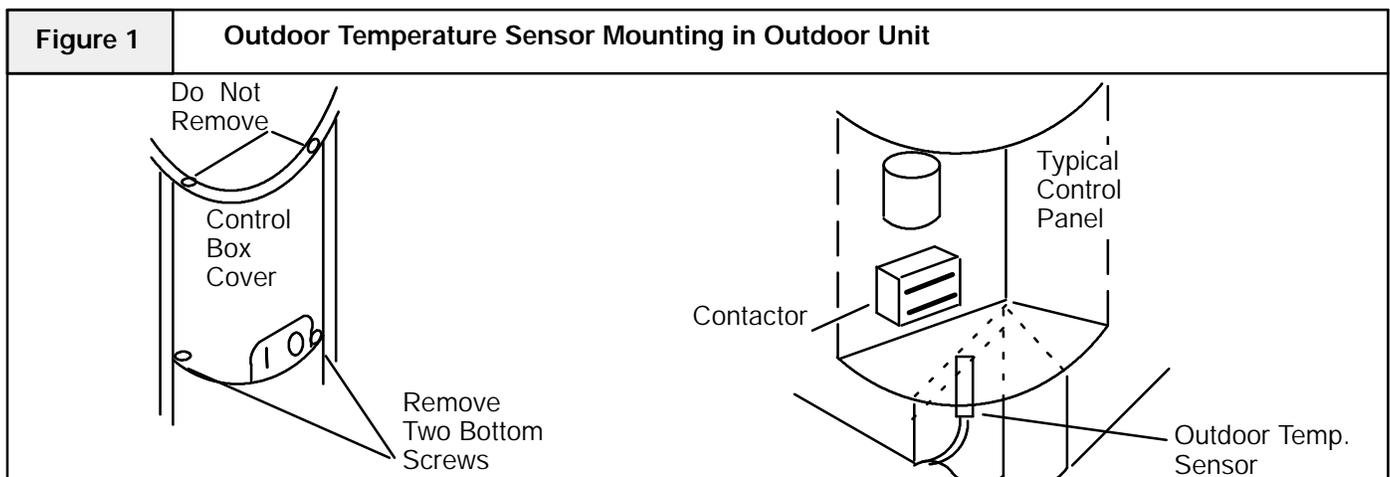
### OUTDOOR TEMPERATURE SENSOR LOCATION/MOUNTING

The outdoor sensor can be mounted inside the control box of the outdoor section (heat pump or cooling condenser) or it can be mounted in any suitable outdoor location. Consider location of units relative to each other and necessary low voltage wiring between them when determining location for sensor.

#### Mounting in Control Box; Figure 1

Remove the two (2) bottom screws from the control box cover and pull cover down and outward. Cover is notched to clear top screws so it will slide out from under top edge of unit.

Place sensor in low voltage wiring area as shown in Fig. 1.



## Remote Mounting of Sensor;

Select a suitable location where sensor will not be exposed to direct sunlight or prevailing winter winds. Avoid surfaces which can hot or cold soak, such as a brick or masonry wall.

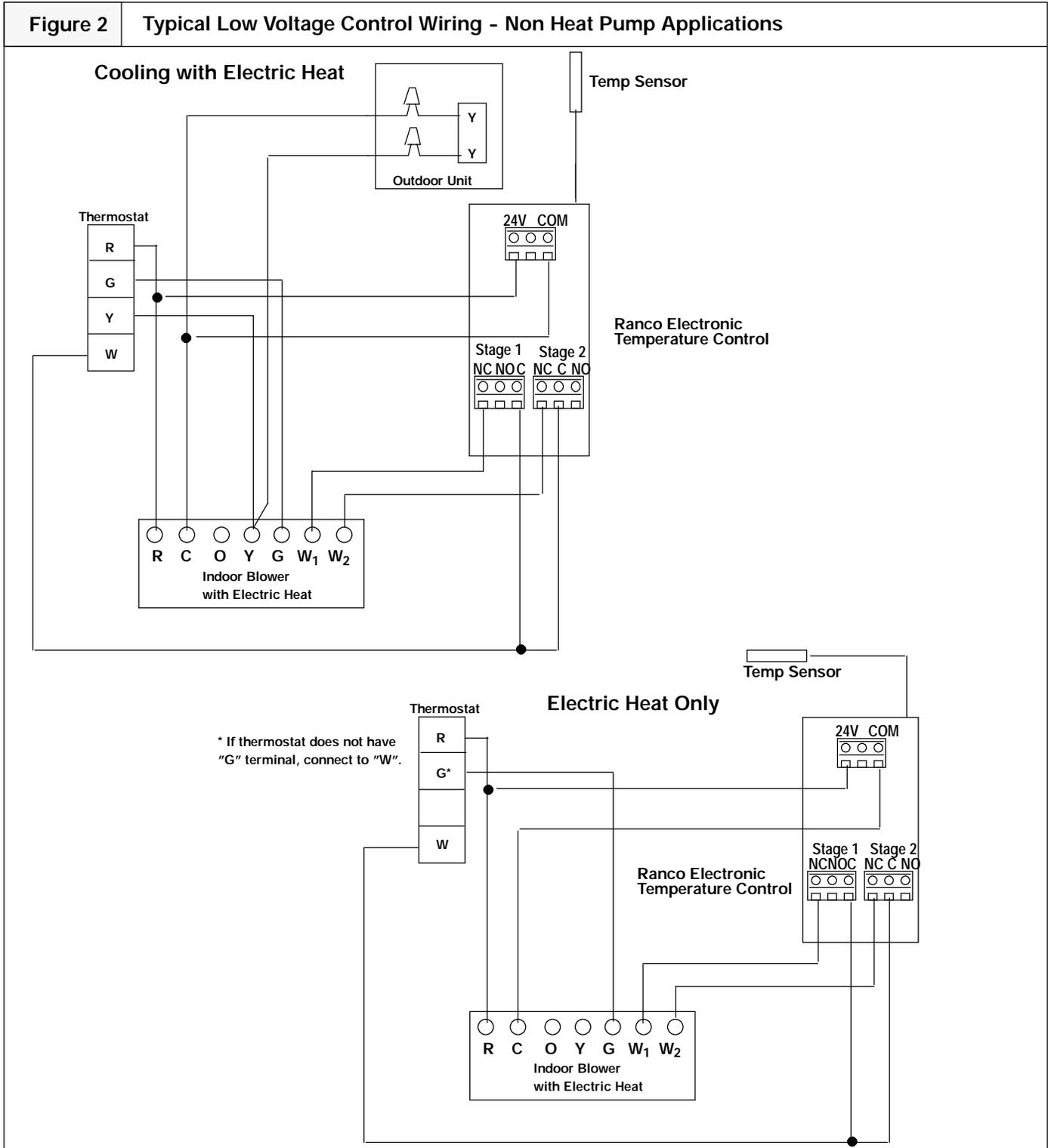
Do not locate where warm exhaust air, etc., (such as near dryer vent) could affect it. Suggested locations would be under a ledge or window sill.

## Wire Connections

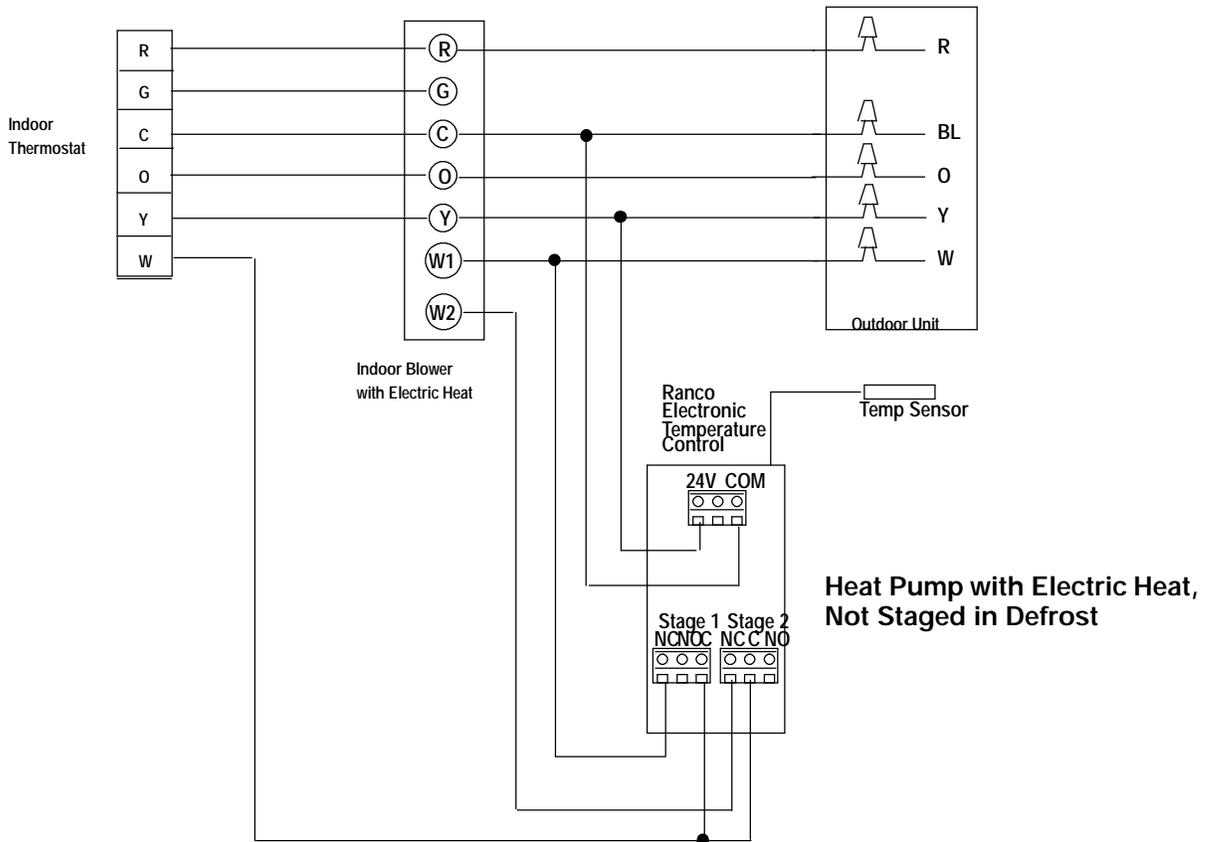
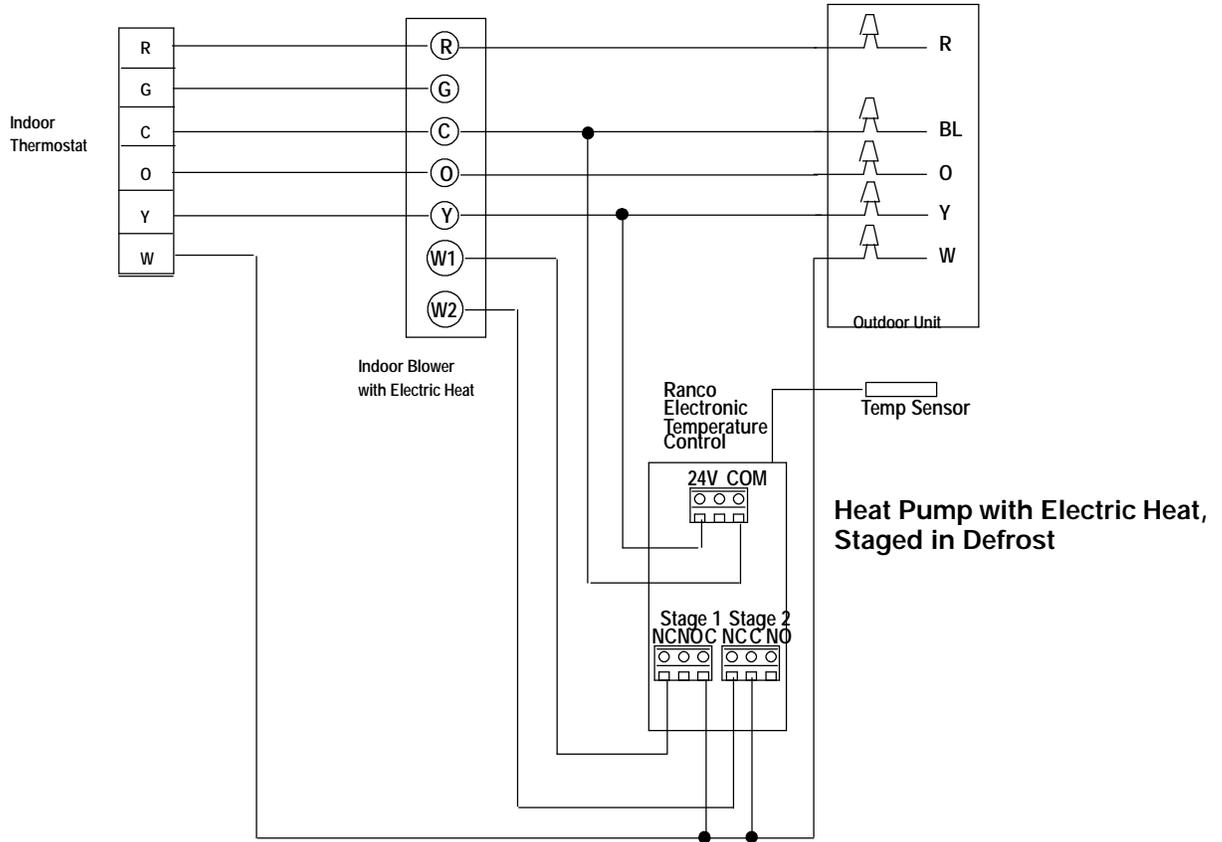
Wire routing will be determined by the physical location of equipment. Use the following point to point requirements to help determine wire routing and number of wires required.

## Use Minimum 18 Gauge Thermostat Wire

Complete connections at terminals. If wire nuts are used outdoors they should be taped over to keep moisture out. Refer to **Figure 2 and 3**.



**Figure 3 Typical Low Voltage Control Wiring - Heat Pump Applications**



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## PROGRAMING CONTROL

Refer to the Ranco Installation Instructions for details on the programing steps. For this application the **C1** and **C2** settings will be used. **C1** will be the first stage (the higher temperature of the two settings) and **C2** will be the second stage. On heat pumps the control is powered by the compressor circuit, so this circuit will need to be on for programing the control. The following are the steps for setting an example system specified at 40 Deg. F for the first stage of electric heat and 25 Deg. F. for the second stage:

### NOTE:

The **C1** and **C2** settings are used in conjunction with the **NC** normally closed contacts so all of the electric heat can come on in Emergency Heat Mode.

### TO PROGRAM:

Press **SET** button.

**F** or **C** will display for Fahrenheit or Celsius. Use up or down arrow key to select **F**.

Press **SET** button again.

This is the setting for the first stage. Notice that **S1** is flashing on the display. Press the up or down arrow until **40** is displayed.

Press **SET** button again.

This is the temperature differential between the active and

inactive states of the first stage. This may be set as low as 1 degree, but 4 is recommended.

Press **SET** button again.

This selects **C1** mode or **H1** mode. Use arrow key to select **C1**.

Press **SET** button again.

This is the setting for the second stage. Notice that **S2** is flashing on the display. Press the up or down arrow until **25** is displayed.

Press **SET** button again.

This is the temperature differential between the active and inactive states of the first stage. This may be set as low as 1 degree but 4 is recommended.

Press **SET** button again.

This selects **C2** mode or **H2** mode. Use arrow key to select **C2**.

Press **SET** button again.

Programing is complete. The program is now stored in non-volatile memory, so power loss will not require re-programing.

There is a **LOCK** feature that is described in the Ranco Installation Instructions. This should be set to lock to prevent accidental changes to the program.